

Abstract

Electric Storage Augmentation of Fuel Cell Response to AC System Transients

5 A fuel cell power plant (9) provides DC power to an inverter (12)
which provides power to three-phase power lines (16) which are
connectable to a power grid (18) by switches (17), and which are
connected to a critical customer load (30). An energy storage device
(40) provides DC power to a bi-directional DC/AC converter (36)
which is connectable through switches (34) to said three-phase
power lines or to said power grid. A diode (45) may passively
10 provide fuel cell power plant energy directly to the energy storage
device so as to charge it, or bypass the primary DC/AC inverter in the
event that it fails. Lapses in power caused by the inverter shutting
down due to perturbations on the grid are avoided by power supplied
by the converter using energy from the energy storage device.